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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/733,007 | 12/09/2003 | Mohammed N. Islam | 074036.0131 | 8643 |
| 5073 | 7590 | 06/28/2004 | EXAMINER | |
| BAKER BOTTS L.L.P. 2001 ROSS AVENUE SUITE 600 DALLAS, TX 75201-2980 | | | KANG, JULIANA K | |
| | | ART UNIT | PAPER NUMBER | 2874 |

DATE MAILED: 06/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|-----------------------------|---------------------------|--|
| Office Action Summary | Applicant No. | Applicant(s) | |
| | 10/733,007 | ISLAM ET AL. <i>PW</i> | |
| | Examiner Juliana K. Kang | Art Unit 2874 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on ____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) Claim(s) ____ is/are allowed.
- 6) Claim(s) 1-21 is/are rejected.
- 7) Claim(s) ____ is/are objected to.
- 8) Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 09 December 2003 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All
 - b) Some *
 - c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. ____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/9/03
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: ____.

DETAILED ACTION

Inventorship

1. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-21 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-36 of U.S. Patent No.

Art Unit: 2874

6,721,475 B1. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 1-36 of the patent recite all the structure recited in claims 1-21 of the present application plus additional structure. Although the claims are not identical, broader claims 1-21 of the present application are rendered obvious by the more specific claims 1-36 of the patent.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-3 and 8-10 rejected under 35 U.S.C. 102(e) as being anticipated by Riza (U.S. Patent 6,222,954 B1).

Regarding claims 1 and 3, Riza disclose an optical system comprising a wavelength division demultiplexer (25) separating a multiple wavelength signal into a plurality of wavelength signals; a first beam splitter (39) operable to receive at least one of the plurality of wavelength signals as an optical input signal, and to communicate at least a first part of the optical input signal in a first path and a second part of the optical input signal in a second path, wherein the first part of the optical input signal is received by a MEMS device (41) comprising a piston-type micromirror device(37) which can

cause the optical path difference and thus resulting the first part and the second part of the optical input signal to have unequal amplitudes and making the output signal capable of being varied; and a wavelength division multiplexer (see column 6 lines 1-23 and Fig. 4).

Regarding claim 2, Riza disclose two beams (first part and second part) interfered at the splitter (see column 6 lines 10-12).

Regarding claim 4, Riza shows a plurality of adjacent mirror strips in Fig. 4.

Regarding claims 8-10 and 14, as described above Riza disclose the claimed invention including attenuators (MEMS).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 5 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Riza as applied to claims 1 and 8 above, and further in view of Crane et al (U.S. Patent 5,023,845).

As described above, Riza discloses the claimed invention except the beam splitter selected from the group consisting of a partially silvered mirror, a mirror having at least one layer of a dielectric coating and a fiber coupler. Riza 's bema splitter is a prism. Crane et al teach using a prism as a bema splitter and further teaches that

other acceptable beam splitter devices include a partially reflecting mirror and a plane parallel plate which has one surface coated with a dielectric or metallic coating (see column 6 lines 43-51). Therefore, because a prism and a mirror with dielectric coating were art-recognized equivalents at the time the invention was made, one of ordinary skill in the art would have found it obvious to substitute a mirror with dielectric coating for a prism in Riza.

7. Claims 6, 7, 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Riza as applied to claims 1 and 8 above, and further in view of Pilossof (US 2002/0021485).

As described above, Riza discloses the claimed invention including the MEMS. However, Riza does not teach the details of the MEMS structure. Pilossof teaches MEMS comprising an inner conductive layer conductive layer comprising silicon substrate and electrode (50) placed inwardly from the strips of moveable mirror layer (60). Pilossof shows a space between the inner conductive layer and the mirror layer. The moveable mirror layer comprising conductive structure operable to move relative to the inner conductive layer in response to a voltage difference between the moveable mirror layer and the inner conductive layer (see Figs. 4a and 4b and see paragraphs [0035] and [0036]). Since Riza teaches piston-type micromirror device and does not limit the MEMS to a specific MEMS structure, it would have been obvious to one with ordinary skill in the art to use any type of MEMS that provides the piston-type action including Pilossof's MEMS structure for faster response.

Conclusion

8. The prior art documents submitted by applicant have been considered and made of record (note the attached copy of form PTO-1449).
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Juliana K. Kang whose telephone number is (571) 272-2348. The examiner can normally be reached on Mon. & Fri. 10:00-6:00 and Tue. & Thur. 10:00-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rod Bovernick can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Juliana Kang
June 25, 2004